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**IN THE UNITED STATES RECEIVING OFFICE
Before the United States Receiving Office
for the Patent Cooperation Treaty**

**In re application of: Crisanto GUTIERREZ-ARMENTA and Elena RAMIREZ-PARRA,
et al.**

U.S. Serial No.:

International Application No.: PCT/EP00/09325

International Filing Date: 25 September 2000 (25.09.2000)

For: WHEAT DP PROTEINS AND USES THEREOF

**Assistant Commissioner for Patents
BOX PCT DO/EO/US
Washington, DC 20231**

TRANSMITTAL LETTER SUBMITTING SEQUENCE LISTING

Applicant submits herewith the Sequence Listing in written (11 sheets) and computer readable form (1 diskette), the contents of which are the same.

The enclosed Sequence Listing does not go beyond the disclosure in the international application as filed.

Respectfully submitted,



Paul K. Legaard
Registration No. 38,534

/lw

Enc.: 1 Diskette ; 11 sheets sequence listing

Date: 22 March 2002

WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia, PA 19103
(215) 568-3100

10/088830

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SEQUENCE LISTING

<110> Gutierrez-Armenta, Crisanto
Ramirez-Parra, Elena

<120> Wheat DP Proteins And Uses Thereof

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<150> P9902127

<151> 1999-09-24

<150> PCT/EP00/09325

<151> 2000-09-25

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<151> 1999-11-11

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<170> PatentIn version 3.1

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95 100 105

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110 115 120

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Ile Ala Leu Arg Val Ile Ala Lys Glu Lys Lys Glu Ile Arg Trp Met
125 130 135

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140 145 150 155

cgt aaa gaa ctc gtc aac aag att agg aac aag aag gca ctc ctc cag 532
 Arg Lys Glu Leu Val Asn Lys Ile Arg Asn Lys Lys Ala Leu Leu Gln
 160 165 170
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 190 195 200
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 Phe Val Leu Val Lys Thr Ser Arg Lys Ala Arg Val Glu Ile Glu Ile
 205 210 215
 tca gat gac tcg aag ttt gcc cat ttc gag ttc aat ggt gca cca ttc 724
 Ser Asp Asp Ser Lys Phe Ala His Phe Glu Phe Asn Gly Ala Pro Phe
 220 225 230 235
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 Thr Leu His Asp Asp Leu Ser Ile Leu Glu Gly Val Arg Arg Asn Ser
 240 245 250
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 Ile Gly Arg Ala Gly Arg Ala Thr Leu His
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 35 40 45

Asp Lys Asp Arg Lys Lys Glu Lys Ala Ala Ala Pro Arg Ile Thr Gly
 50 55 60

Trp Gly Leu Arg Glu Tyr Ser Lys Ile Val Cys Glu Lys Val Glu Ala
 65 70 75 80

Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Ile Tyr Ser Glu
 85 90 95

Leu Lys Ser Met Ala His Ile Gly Gln Gly Phe Asp Glu Lys Asn Ile
 100 105 110

Arg Arg Arg Val Tyr Asp Ala Phe Asn Val Leu Ile Ala Leu Arg Val
 115 120 125

Ile Ala Lys Glu Lys Lys Glu Ile Arg Trp Met Gly Leu Ser Asn Tyr
 130 135 140

Arg Tyr Glu Lys Ile Lys Lys Leu Glu Glu Val Arg Lys Glu Leu Val
 145 150 155 160

Asn Lys Ile Arg Asn Lys Lys Ala Leu Leu Gln Glu Ile Glu Lys Gln
 165 170 175

Phe Asp Asp Leu Gln Asn Ile Lys Leu Arg Asn Gln Thr Leu Glu Ser
 180 185 190

Ser Ala Glu Asn Val Asn Gly Ile Arg Leu Pro Phe Val Leu Val Lys
 195 200 205

Thr Ser Arg Lys Ala Arg Val Glu Ile Glu Ile Ser Asp Asp Ser Lys
 210 215 220

Phe Ala His Phe Glu Phe Asn Gly Ala Pro Phe Thr Leu His Asp Asp
 225 230 235 240

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 245 250 255

Arg Ala Thr Leu His
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 ccgggagtcg ggggtcccgc agcgcgcgat cgcgagatcg ggctt atg tct ggc ggc 177
 Met Ser Gly Gly
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ggc agg ccg ccg gct gcg caa aaa atc ctg cag tct ctg cgc ccg ccc 225
 Gly Arg Pro Pro Ala Ala Gln Lys Ile Leu Gln Ser Leu Arg Pro Pro
 5 10 15 20

ccg gtg ttc tcc acg ccg tcg cgg cct ccc ttc gcc tca ccc gac gac 273
 Pro Val Phe Ser Thr Pro Ser Arg Pro Phe Ala Ser Pro Asp Asp
 25 30 35

tac cac cgc ttt cat gcg ccg act acc cct tct gcc act ggc tcc ggc 321
 Tyr His Arg Phe His Ala Pro Thr Thr Pro Ser Ala Thr Gly Ser Gly
 40 45 50

ggc atc ggc tcc ggt ggt gtt ggc ggc gat att gat gag ggg ctt gtt 369
 Gly Ile Gly Ser Gly Gly Val Gly Gly Asp Ile Asp Glu Gly Leu Val
 55 60 65

atc cgg acg cag cta aaa aga aaa gcc aca cgc gaa gaa aat aat gcg 417
 Ile Arg Thr Gln Leu Lys Arg Lys Ala Thr Arg Glu Glu Asn Asn Ala
 70 75 80

gct gag tcg agt gac tgt atg att gtc acc act gga gtt act ggc aat 465
 Ala Glu Ser Ser Asp Cys Met Ile Val Thr Thr Gly Val Thr Gly Asn
 85 90 95 100

ccg cta ctc acc cca gtg tct gga aaa gct gtt aag aat tct aaa tca 513
 Pro Leu Leu Thr Pro Val Ser Gly Lys Ala Val Lys Asn Ser Lys Ser
 105 110 115

aag act aag aac aat aaa gct ggg cct cag aca cct acg cca aat gtt 561
 Lys Thr Lys Asn Asn Lys Ala Gly Pro Gln Thr Pro Thr Pro Asn Val
 120 125 130

ggc tca cca ctc aat cca tca act cct gct ggt act tgc cgc tat gac 609
 Gly Ser Pro Leu Asn Pro Ser Thr Pro Ala Gly Thr Cys Arg Tyr Asp
 135 140 145

agt tcg tta gga ctt ctg aca aag aag ttc atc aat ttg ctg aag caa 657
 Ser Ser Leu Gly Leu Leu Thr Lys Lys Phe Ile Asn Leu Leu Lys Gln
 150 155 160

gct gag gat ggc att cta gat ttg aat aat gct gca gaa aca cta gag 705
 Ala Glu Asp Gly Ile Leu Asp Leu Asn Asn Ala Ala Glu Thr Leu Glu
 165 170 175 180

gtt caa aag cga cgc ata tat gac atc aca aat gtc ctc gaa gga att 753
 Val Gln Lys Arg Arg Ile Tyr Asp Ile Thr Asn Val Leu Glu Gly Ile
 185 190 195

ggt ctt ata gaa aag aca ctt aaa aac aga att cgt tgg aag ggc ttg 801
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 200 205 210

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 215 220 225

gaa gtt gaa aat ctt aat ttg cag gag caa gcc tta gat gag cgt ata 897
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 230 235 240

agt gat atg cgc gaa aag cta agg ggg tta acg gaa gat gag aac agt 945
 Ser Asp Met Arg Glu Lys Leu Arg Gly Leu Thr Glu Asp Glu Asn Ser
 245 250 255 260

caa aga tgg ctc tat gtg acg gaa gat gat atc aag gga tta ccc tgc 993
 Gln Arg Trp Leu Tyr Val Thr Glu Asp Asp Ile Lys Gly Leu Pro Cys
 265 270 275

ttt cag aat gaa act cta att gca ata aaa gct cct cat ggt act aca 1041
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 280 285 290

ctt gaa gta cct gat cct gat gag gct ggt gat tat ctc cag agg aga 1089
 Leu Glu Val Pro Asp Pro Asp Glu Ala Gly Asp Tyr Leu Gln Arg Arg
 295 300 305

tac aga atc gta tta aga agt acc ctg ggt cca ata gat gtt tac tta 1137
 Tyr Arg Ile Val Leu Arg Ser Thr Leu Gly Pro Ile Asp Val Tyr Leu
 310 315 320

gtt agt caa ttt gac gat gga ttt gag aat ttg ggt ggt gct gcg aca 1185
 Val Ser Gln Phe Asp Asp Gly Phe Glu Asn Leu Gly Gly Ala Ala Thr
 325 330 335 340

cct.cca agg cat aca aat gtc cca aaa cct gga cct tgt gaa gac tta 1233
Pro Pro Arg His Thr Asn Val Pro Lys Pro Gly Pro Cys Glu Asp Leu
345 350 355

cat gca aca aac gct aca caa agc agc aaa tca atc aat gtg gaa tat 1281
His Ala Thr Asn Ala Thr Gln Ser Ser Lys Ser Ile Asn Val Glu Tyr
360 365 370

aat att cag cac agg cag aat act cca caa gat cct agt tct tca aat 1329
Asn Ile Gln His Arg Gln Asn Thr Pro Gln Asp Pro Ser Ser Ser Asn
375 380 385

gat tat gga ggg atg aca agg ata atc cct tca gat gtt aat act gat 1377
Asp Tyr Gly Gly Met Thr Arg Ile Ile Pro Ser Asp Val Asn Thr Asp
390 395 400

gct gat tac tgg ctc cta aca gag ggt gat gtt agt att act gac atg 1425
Ala Asp Tyr Trp Leu Thr Glu Gly Asp Val Ser Ile Thr Asp Met
405 410 415 420

tgg gaa aca gca cca gaa gtg cag tgg gac acc gct gtg ttt tta cct 1473
Trp Glu Thr Ala Pro Glu Val Gln Trp Asp Thr Ala Val Phe Leu Pro
425 430 435

gaa gat gtt agc atc cca cat gca cat cat agt ccg cgg atg cag gtt 1521
Glu Asp Val Ser Ile Pro His Ala His His Ser Pro Arg Met Gln Val
440 445 450

cca agc atg gat caa cca taagggtcatg gcggtgaaaaa cttgacatat 1569
Pro Ser Met Asp Gln Pro
455

ggaattcctg gagtgctgtt tcagaaaata ctgatttcaa aatggaaaga tcagggcagc 1629

aagttcagac tgatcacctg tctgaatttg ctgtttgtta tggagacgat tggtgccaac 1689

taacttatca gtctgtgcc ttgtttgttc tggcacctgt ccttcagttg aaaaggcgcc 1749

catgtgcata ttgcaccttg aattcgggct gctatgcaca ttcggtatct gctttatttc 1809

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<213> Triticum monococcum

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35 40 45

Thr Gly Ser Gly Gly Ile Gly Ser Gly Gly Val Gly Gly Asp Ile Asp
50 55 60

Glu Gly Leu Val Ile Arg Thr Gln Leu Lys Arg Lys Ala Thr Arg Glu
65 70 75 80

Glu Asn Asn Ala Ala Glu Ser Ser Asp Cys Met Ile Val Thr Thr Gly
85 90 95

Val Thr Gly Asn Pro Leu Leu Thr Pro Val Ser Gly Lys Ala Val Lys
100 105 110

Asn Ser Lys Ser Lys Thr Lys Asn Asn Lys Ala Gly Pro Gln Thr Pro
115 120 125

Thr Pro Asn Val Gly Ser Pro Leu Asn Pro Ser Thr Pro Ala Gly Thr
130 135 140

Cys Arg Tyr Asp Ser Ser Leu Gly Leu Leu Thr Lys Lys Phe Ile Asn
145 150 155 160

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165 170 175

Glu Thr Leu Glu Val Gln Lys Arg Arg Ile Tyr Asp Ile Thr Asn Val
180 185 190

Leu Glu Gly Ile Gly Leu Ile Glu Lys Thr Leu Lys Asn Arg Ile Arg
195 200 205

Trp Lys Gly Leu Asp Asp Ser Gly Val Glu Leu Asp Asn Gly Leu Ser
210 215 220

Gly Leu Gln Thr Glu Val Glu Asn Leu Asn Leu Gln Glu Gln Ala Leu
225 230 235 240

Asp Glu Arg Ile Ser Asp Met Arg Glu Lys Leu Arg Gly Leu Thr Glu
245 250 255

Asp Glu Asn Ser Gln Arg Trp Leu Tyr Val Thr Glu Asp Asp Ile Lys
260 265 270

Gly Leu Pro Cys Phe Gln Asn Glu Thr Leu Ile Ala Ile Lys Ala Pro
275 280 285

His Gly Thr Thr Leu Glu Val Pro Asp Pro Asp Glu Ala Gly Asp Tyr
290 295 300

Leu Gln Arg Arg Tyr Arg Ile Val Leu Arg Ser Thr Leu Gly Pro Ile
305 310 315 320

Asp Val Tyr Leu Val Ser Gln Phe Asp Asp Gly Phe Glu Asn Leu Gly
325 330 335

Gly Ala Ala Thr Pro Pro Arg His Thr Asn Val Pro Lys Pro Gly Pro
340 345 350

Cys Glu Asp Leu His Ala Thr Asn Ala Thr Gln Ser Ser Lys Ser Ile
355 360 365

Asn Val Glu Tyr Asn Ile Gln His Arg Gln Asn Thr Pro Gln Asp Pro
 370 375 380

Ser Ser Ser Asn Asp Tyr Gly Gly Met Thr Arg Ile Ile Pro Ser Asp
 385 390 395 400

Val Asn Thr Asp Ala Asp Tyr Trp Leu Leu Thr Glu Gly Asp Val Ser
 405 410 415

Ile Thr Asp Met Trp Glu Thr Ala Pro Glu Val Gln Trp Asp Thr Ala
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Arg Met Gln Val Pro Ser Met Asp Gln Pro
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 Thr Ala Ala Leu Asp Leu Thr Gly Val His Ile Leu Glu Ala Ser Ser
 20 25 30
 gtc ccc ccg ctt ccc gaa cgc ggc ggt aat gcg gtc caa agg aag ggg 144
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 35 40 45
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 Ala Val Asp Pro
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 35 40 45

Ala Val Asp Pro

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 Trp Gly Leu Arg Glu Tyr Ser Lys Ile Val Cys Glu Asn Val Glu Ala
 20 25 30
 aaa gga aga aca aca tac aat gag gtt gca gac gaa att tat tca gag 144
 Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Ile Tyr Ser Glu
 35 40 45
 ctg aag tcc 153
 Leu Lys Ser
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 <213> Triticum monococcum

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 35 40 45
 Leu Lys Ser
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 Val Tyr Asp Ala Phe Asn Val Leu Ile Ala Leu Arg Val Ile Ala Lys

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25

30

gaa aaa aag gag ata cgg tgg atg ggc ctt tca aat tac aga tat gaa
 Glu Lys Lys Glu Ile Arg Trp Met Gly Leu Ser Asn Tyr Arg Tyr Glu
 35 40 45

144

aaa ata aag aag ctt gag gaa gtt
 Lys Ile Lys Lys Leu Glu Glu Val
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168

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 35 40 45

Lys Ile Lys Lys Leu Glu Glu Val
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48

gaa atc gaa aaa cag ttt gat gat ctc caa aac atc aag tta cgt aac
 Glu Ile Glu Lys Gln Phe Asp Asp Leu Gln Asn Ile Lys Leu Arg Asn
 20 25 30

96

caa aca ctg gaa agc tca gca gag aat gtt aat ggc atc cgc ctt cca
 Gln Thr Leu Glu Ser Ser Ala Glu Asn Val Asn Gly Ile Arg Leu Pro
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Gln Thr Leu Glu Ser Ser Ala Glu Asn Val Asn Gly Ile Arg Leu Pro
 35 40 45

Phe Val Leu Val Lys Thr Ser Arg
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 Phe Glu Phe Asn Gly Ala Pro Phe Thr Leu His Asp Asp Leu Ser Ile
 20 25 30

ctt gag ggg gta agg cgt aac agc ata gga aga gct ggc cgc gcc acc 144
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 35 40 45

ctt cac 150
 Leu His
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 <211> 50
 <212> PRT
 <213> Triticum monococcum

<400> 14

Lys Ala Arg Val Glu Ile Glu Ile Ser Asp Asp Ser Lys Phe Ala His
 1 5 10 15

Phe Glu Phe Asn Gly Ala Pro Phe Thr Leu His Asp Asp Leu Ser Ile
 20 25 30

Leu Glu Gly Val Arg Arg Asn Ser Ile Gly Arg Ala Gly Arg Ala Thr
 35 40 45

Leu His
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 <213> Artificial Sequence

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 <223> E2F canonical binding site probe

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<222> (8)..(16)
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25